

PROCEEDINGS
OF THE
CALIFORNIA ACADEMY OF SCIENCES
FOURTH SERIES

Vol. XXXI, No. 17, pp. 499-505, 2 figs.

December 20, 1963

TWO NEW GENERA OF LEPTODACTYLID
FROGS FROM COLOMBIA

By

Coleman J. Goin

University of Florida, Gainesville, Florida

and

Doris M. Cochran

United States National Museum, Washington, D. C.

Included among the novelties we have found in our studies on the frogs of Colombia are two diminutive specimens of leptodaetylids that do not seem to be congeneric with each other or with other known leptodaetylids. Since we believe it would be unwise to hold back descriptions of new genera until our report on the frogs of Colombia is published, we submit the descriptions of these two new ones at the present time.

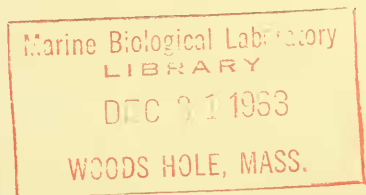
Included in the unidentified material sent to us by our good friend Hermano Nicéforo María of Bogotá is a single specimen of a small leptodaetylid from Páramo de La Rusia in Santander.

It seems proper that this genus be dedicated to this distinguished Colombian herpetologist who discovered the only known specimen.

Niceforonia Goin and Cochran, new genus.

TYPE SPECIES. *Niceforonia nana*, new species.

DIAGNOSIS. A leptodaetylid with a cartilaginous sternum; terminal phalanges terminating in an expanded knob but not distinctly T-shaped; tips of digits not expanded into distinct disks; no tympanum apparent;



pupil horizontal; maxillary teeth present; no odontoids on mandible; vomerine teeth in two small, distinct patches lying well behind the small choanae; tongue elongate, entire and free behind; fingers free of web, toes with but the merest vestige of web at the base; cranial derm free of skull; roof of skull not exostosed.

Niceforonia nana Goin and Cochran, new species.

(Figure 1.)

TYPE. Museo de La Salle 142, adult female, Colombia, Santander, Páramo de La Rusia, collected by Hno. Nicéforo María.



FIGURE 1. *Niceforonia nana*, type, Museo de La Salle 142, Colombia, Santander, Páramo de La Rusia. Actual length, 20.5 mm. $\times 3$.

DESCRIPTION OF TYPE. No bony ridges on top of head. Vomerine teeth in 2 short, slanting, narrowly separated series far behind the choanae; tongue $\frac{1}{2}$ as wide as mouth opening, elongate, broadly oval, its posterior border free and unnotched; snout moderate in length, rounded when viewed from above, slanting forward in profile, the upper jaw extending very slightly beyond the lower. Nostrils small, scarcely projecting, their distance from end of snout a trifle greater than their distance from eye. Canthus rostralis strong, curved; loreal region weakly concave, slanting outward to the upper lip. Eye rather small, but with very thick lids to give it additional prominence, its diameter about $\frac{1}{5}$ its distance from tip of snout; interorbital diameter $1\frac{1}{2}$ times that of upper eyelid, equal to interval between nostrils. Tympanum concealed. Fingers moderately long, with faint lateral ridges, free, their tips scarcely enlarged, first a little shorter than second, which equals the fourth, both of these extending to base of terminal phalanx of third; a distinct oval thumb pad present, also one at base of second finger; a rounded palmar callus; metacarpal tubercles well developed. Toes fairly long, with little trace of web, third longer than fifth, its tips reaching to middle of antepenultimate phalanx of fourth, the tips of all the toes slightly enlarged and flattened above; a distinct, oval, inner metatarsal tubercle, and a smaller, rounded, outer one; no apparent tarsal ridge; a series of heavy skinfolds on heel and knee. Body very stout, in postaxillary region much wider than greatest width of head. When hind leg is adpressed, heel reaches front of shoulder; when limbs are laid along the side, knee and elbow are widely separated; when hind legs are bent at right angles to body, heels are narrowly separated. Skin of upper parts finely granular, with narrow, interrupted, lateral, glandular line between posterior border of eye and sacrum; some heavy tubercles scattered over posterior third of back; sides heavily granular; venter smooth on throat, chest and anterior half of belly, becoming granular on posterior part of belly, on posterior femur and below vent; a short, thick, glandular ridge from lower posterior corner of eye, dropping behind corner of mouth, and continuing as a series of 2 or 3 small glands along side of neck, ending on proximal anterior part of humerus; a strong skinfold across the chest; a very distinct ventral disk.

DIMENSIONS. Head and body, 20.5 mm.; head length (to end of upper jaw), 7 mm.; head width, 7.5 mm.; femur, 8 mm.; tibia, 7.5 mm.; foot, 8 mm.; hand, 5.5 mm.

COLOR (in alcohol). Dorsum seal brown to walnut brown, lightening on sides to wood brown; venter wood brown, immaculate except for some

darker shadings between the granules on posterior belly; side of head immaculate fawn color, becoming a little darker near canthus; anterior femur seal brown on upper half, light wood brown on lower half; posterior thigh Mars brown with one or two paler spots; soles of feet and palms of hands pale wood brown, their tubercles and webs similar in color.

DISCUSSION. Just what the relationships of *Niceforonia* are is at present a moot question. In many ways it is structurally more like the forms of *Borborocoetes* which lack the tympanum.

When first examined the type specimen gives the impression of being immature, but there can be no doubt that it is an adult for it is a female packed with large ripe eggs.

The large unpigmented eggs (the individual eggs are approximately 2.00 mm. in diameter) probably indicate that *Niceforonia* is a terrestrial breeder. This would not be unexpected or inappropriate for a species living in the páramos. It may be that this species, the type of which was collected in the Páramo de La Rusia, is restricted to the páramos.

The other new form was collected 20 miles east of Pasto, Nariño. While the collector, E. S. Ross, gave no more precise data, this locality is certainly in a mountainous district and may well be on a páramos.

Trachyphrynus Goin and Cochran, new genus.

TYPE SPECIES. *Trachyphrynus myersi*, new species.

DIAGNOSIS. A leptodactylid with T-shaped terminal phalanges, a distinct tympanum; no vomerine teeth and rounded sacral diapophyses.

The combination of T-shaped phalanges and no vomerine teeth makes it readily separable from all forms except *Crossodactylus* and *Crossodactylodes*. The presence of a tympanum distinguishes it at once from *Crossodactylodes*. From *Crossodactylus*, which is perhaps its closest relative, it differs in having simple tips to the digits rather than having them furrowed above. It is not yet known if the males have the spines at the base of the first finger as in *Crossodactylus*.

Trachyphrynus myersi Goin and Cochran, new species.

(Figure 2.)

TYPE. California Academy of Sciences 85177, adult female, Colombia, Nariño, 20 miles east of Pasto, March 1, 1955.

DESCRIPTION OF TYPE. No bony ridges on top of head; no vomerine teeth; maxillary teeth weakly developed; tongue $\frac{3}{4}$ as wide as mouth open-

ing, nearly circular, its posterior border free and not indented; snout broadly rounded when viewed from above, narrowly truncate in profile, the upper jaw extending slightly beyond the lower. Nostrils lateral, strongly projecting, their distance from end of snout about $\frac{1}{2}$ their distance from eye. Canthus rostralis appearing sharp because of a glandular ridge along it from eyelid almost to nostril; loreal region flat, vertical, with the upper lip flaring sharply below it. Eye large, prominent, its diameter nearly as great as its distance from end of snout; interorbital diameter $1\frac{1}{2}$ times that of upper eyelid, much greater than interval between the nostrils. Tympanum distinct, its greatest diameter $\frac{1}{2}$ that of



FIGURE 2. *Trachyphrynus myersi*, type, California Academy of Sciences 85177, Colombia, Nariño, 20 miles east of Pasto. Actual length, 22.0 mm. $\times 3$.

eye, separated from eye by an interval equal to $\frac{1}{2}$ its own diameter. Fingers fairly long, with disks on the three outer ones, the inner one not enlarged at tip, all with very faint lateral ridges, free, first shorter than second, fourth longer than either and reaching to base of penultimate phalanx of third, the disk of which covers $\frac{1}{4}$ the tympanum; an oval thumb pad present, and a cordiform palmar callus; metacarpal tubercles well developed. Toes long, barely webbed at the base, third and fifth subequal, their disks reaching to base of antepenultimate phalanx of fourth; disk of fourth toe covering about $\frac{1}{3}$ of tympanum, hence a trifle larger than that of third finger; a large, blunt oval inner metatarsal tubercle and a smaller, rounded outer one; a weak inner tarsal ridge, enlarged into an oval gland just behind the inner metatarsal tubercle and ending before reaching heel; a row of 3 or 4 small elongate glands along outer tarsal border, ending with a small blunt heel tubercle. Body stout, in post-axillary region equal to greatest width of head. When hind leg is adpressed, heel reaches posterior border of tympanum; when limbs are laid along the side, knee and elbow are widely separated; when hind legs are bent at right angles to body, heels barely touch. Skin of upper parts with many spiny glandules and a network of glandular lines, the most prominent of which are the dorsolateral ones, an x-shaped pair behind head and several transverse ones on sacrum and across tibia; head with a small, pointed gland at tip of snout; venter coarsely granular on belly, faintly granular on chest, throat and lower thigh; a fine glandular ridge from posterior corner of eye above tympanum, ending behind it; no skinfold across chest; no ventral disk.

DIMENSION: Head and body, 22 mm.; head length, 8 mm.; head width, 8.5 mm.; femur, 8 mm.; tibia, 8.5 mm.; foot, 8 mm.; hand, 6 mm.

COLOR (in alcohol). Dorsum clove brown, the glandular lines olive-gray; a pair of large russet spots on upper surface of tibia between the diagonal glandular ridges; throat, chest and most of belly clove brown, excepting a narrow buff rim around lower jaw, and several large buff spots across posterior abdomen; lower limb surfaces buff with numerous brown marblings especially on lower thigh and arm, and a brown patch on heel and elbow; side of head with a large buff spot from edge of upper lip to eye; canthus, loreal region and posterior part of jaw dull clove brown; side of body uniform clove brown except for a very large buff to rose pink inguinal patch and a small axillary spot, both with irregular outlines; anterior and posterior thigh rose pink with a few brown marblings, the brown concentrated below anus in an irregular, dark postanal patch; palms

of hands and soles of feet buff, the latter with some brown marblings on 3 outer toes.

DISCUSSION. Since this individual, like the type of the preceding species, is a mature female containing large, unpigmented eggs, it is probable that this species is also a terrestrial breeder. Her abdominal eggs are, like those of *Niceforonia*, 2.0 mm. in diameter.

This species is named for Dr. George S. Myers.

ACKNOWLEDGMENTS

We are indebted to Brother Nicéforo María for the privilege of describing the specimen he collected and presented to us, and to Dr. Alan E. Leviton for the privilege of borrowing and describing the specimen in the collection of the California Academy of Sciences. For comparing these new species with his Ecuadorian material, we are indebted to Dr. James A. Peters. To Mr. Paul Laessle we owe our thanks for the accompanying figures which are from his pen. The senior author's work on South American frogs is supported by a grant, G-13325, from the National Science Foundation, while the junior author's work on South American frogs is supported by a grant, GB-407(201D-294), also from the National Science Foundation.